Neal **Patel**

QUANTITATIVE FINANCE · SOFTWARE DEVELOPMENT

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Experience

Software Engineer – Independent Contractor
New York, NY

SKILLS: Pandas, Docker, Google Apps Scripts, Javascript, Pandas, AWS, OpenAI, Flask, WandB, LangChain   *May 2023 - Present*

- **ML Engineer @ Subconscious.ai**: Developed backend/ETL using Python, R, and GCP for LLM Application using LangChain and WandB
- **Engineer @ New York Squash Inc**: Created a user registration portal and database at Google Apps Scripts and Google Sheets
- **SSS (Private Client)**: Quantitative models on NBA and NFL statistics and predictions using pandas and SKLearn

Software Engineer – Clear Street Markets (Formerly Summit Securities Group)
New York, NY

SKILLS: Airflow, Python, Pandas, AWS, Jira, CI/CD, Gitlab, C++, High Frequency Trading, Arbitrage, Docker, ETL   *November 2022 - February 2023*

- Developed new data engine for large scale exchange data for HFT on options, ETFs, equities, and futures using airflow and podman
- Created test suite and CI/CD for continuous batch processing of 50+ terabyte of nightly data for backtesting and research
- Reduced cloud cost and run time by 4 hours through migrating legacy systems to a serverless, python based solution

Financial Engineer – MerQube Inc. [Seasonal Role]
New York, NY

SKILLS: Pandas, Excel, Airflow, Jira, Github, Python, PyTest, Quantitative Indexing, Docker, Refinitiv, APIs, AWS   *June 2022 - September 2022*

- Calculated, automated, and launched NDXGEN5, MQMAXP6, and other quantitative indices for FIAs, ETNs, and ETFs
- Hired 3 financial engineering staff, included an intern that reported directly to me for mentorship, training, and production projects
- Contributed to internal libraries/APIs to facilitate mathematical computations and maintain a distributed database of financial data
- Interfaced directly with clients including NASDAQ, Citibank, and SILAC to clarify and optimize delivered products

Software Engineer, Scrum Master – Daimler-Benz U.S.A Group [Co-Op]
Brooklyn, NY (Remote: Portland, OR

SKILLS: Python, API, GUIs, Scrum, Excel, Manufacturing, Electric Vehicles, Public Speaking   *January 2022 - April 2022*

- Partnered with Daimler through the NYU Vertically Integrated Project Commission to develop control systems for electric semi trucks
- Lead Sprints with a team of 6 student engineers using traditional Agile and Scrum Development practice
- Collaborate with Daimler staff on campus on deliverable product for the electric semi-truck control systems API and GUI

CoFounder, Quantitative Researcher – Davinci Market Systems LLC
Key West, FL

A FINANCIAL EDUCATION ORGANIZATION WITH A PEAK OF 4000 ACTIVE USERS   *September 2020 - July 2021*

- Created an algorithm for detecting unusual blue chip call option activity, delivered using webhooks and hosted on AWS
- Built trade signals (.78 success rate) on equity option block and sweep orders using vendor APIs, pandas, SKLearn, and discord API
- Wrote and taught coursework ranging from beginner to advanced levels of derivatives trading education, concepts, and strategy

Software Engineering Intern – Novus Partners
New York, NY

SKILLS: Flask, Python, Pandas, ETL, Data Engineering, Quantitative Finance, Scala, Javascript   *July 2020 - December 2020*

- Automated weekly reports and customized portfolio indicators for hedge funds, investment managers, and other financial institutions.
- Engineered a flask based (python) ETL platform for secure transfer of private client data between SFTPs and AWS S3
- Tested and debugged releases and support tickets to the live Alpha platform with the Engineering and Data Analytics teams

Other Projects

makeyouretf.com
New York, NY

A WEBSITE TO DESIGN AND BALANCE YOUR OWN INDEX (OR PORTFOLIO) TRACKING AND TESTING U.S EQUITIES AND ETFS

- Launched a website with hundreds of monthly users for creating custom balanced indices using Flask and Heroku
- Designed and implemented 2 unique calculations for rebalance definition using pandas
- Created a light weight javascript UI to interact with the python/pandas backend for fluidly changing index composition

Extracurricular Activities
New York, NY

UNDERGRADUATE ACTIVITIES

- **NCAA Division 1 Fencing** Fenced in 7 yearly meets under coach Ben Bratton, OLY; trained 20 hours a week at Fencers Club Inc. and on campus
- **Math Finance Group (President)** developed curriculum, participated in trading competitions, organized speaker events; lead research team
- **Model United Nations (D. Head Delegate, Head of Crisis)**; Lead travel team; organized conferences; won best delegate @ YUMUN 2021
- **NYU Memes for Bankrupt Teens**; Ran a meme page with a peak of 20,000 instagram followers and 19,000 facebook members

Education

New York University
New York, NY

B.S in Computer Science | Tandon School of Engineering, Courant Institute of Mathematical Sciences
Minors: Game Engineering, Financial Risk Engineering, Sustainable Urban Environments, Applied Mathematics
Thesis: Urban Environmental Engineering: Addressing Red Flags of the Green New Deal's Labor Problem

- **Spoken Languages:** Illinois State Seal of Biliteracy in Spanish || Native proficiency in Gujarati || Limited Hindi (Reading, Writing, Spoken)
- **Other Experiences and interests:** Stand-up Comedy, Public Speaking, Sustainability/Alternative Energy, Public Policy, Sales Engineering